



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,232	11/22/2005	Bret Cooper	1392/10/19 PCT/US	2354
25297	7590	08/23/2006	EXAMINER	
JENKINS, WILSON, TAYLOR & HUNT, P. A. 3100 TOWER BLVD SUITE 1200 DURHAM, NC 27707			WORLEY, CATHY KINGDON	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,232	<b>Applicant(s)</b> COOPER, BRET	
	<b>Examiner</b> Cathy K. Worley	<b>Art Unit</b> 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-58 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Groups I-XCVI, claims 3-27, 28 (parts a-d; ie. sense or coding sequence), 31-38, and 42-53, drawn to an isolated nucleic acid, a transgenic plant comprising said nucleic acid, and an expression cassette comprising said nucleic acid, wherein said nucleic acid comprises a specified sequence; and wherein the specified sequence for Groups I-XCVI is odd numbered SEQ ID NOs: 1-191, respectively. Claims that do not read on the specified sequence will be withdrawn from consideration.

SOME OF THE GROUPS FROM I-XCVI ARE LINKED BY THE PROTEIN TO WHICH THEY BIND THAT IS LISTED IN CLAIM 1, THEREFORE CLAIM 1 (IN PART) IS A LINKING CLAIM FOR THESE PARTICULAR GROUPS.

Groups XCVII-CXCII, claims 29-30 and 40-41, drawn to an isolated polypeptide comprising a specific amino acid sequence or encoded by a specified nucleic acid and a method of producing said polypeptide; wherein the specific amino acid sequence for groups XCVII-CXCII is one of even numbered SEQ ID NOs: 2-192, respectively and wherein the specified nucleic acid for groups XCVII-CXCII is one of odd numbered SEQ ID NOs: 1-191, respectively.

**SOME OF THE GROUPS FROM XCVII-CXCII ARE LINKED BY THE PROTEIN TO WHICH THEY BIND THAT IS LISTED IN CLAIM 39, THEREFORE CLAIM 39 (IN PART) IS A LINKING CLAIM FOR THESE PARTICULAR GROUPS.**

Groups CXCI-CCCLXII, claims 57-58, drawn to a method for modulating proliferation of a plant cell comprising introducing into the plant cell an expression cassette comprising a specified nucleic acid, wherein the specified nucleic acid for groups CXCI-CCCLXII is one of odd numbered SEQ ID NOs: 1-339, respectively. Claims that do not read on the specified sequence will be withdrawn from consideration.

**SOME OF THE GROUPS FROM CXCI-CCCLXII ARE LINKED BY THE PROTEIN TO WHICH THEY BIND THAT IS LISTED IN CLAIM 54,**

**THEREFORE CLAIMS 54-56 (IN PART) ARE LINKING CLAIMS FOR THESE PARTICULAR GROUPS.**

Groups CCCLXIII- CCCXXXVIII, claim 28 (parts e-f ie. anti-sense or complementary sequence), drawn to an isolated nucleic acid that is a complement to a specified sequence; and wherein the specified sequence for Groups CCCLXIII- CCCXXXVIII is odd numbered SEQ ID NOs: 1-191, respectively. Claims that do not read on the specified sequence will be withdrawn from consideration.

The inventions listed as Groups I- CCCXXXVIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking Groups I- CCCXXXVIII is an isolated nucleic acid encoding a cell proliferation-related polypeptide, wherein the polypeptide binds in a yeast two hybrid assay to a fragment of a protein selected from a list of proteins. However, Kosugi and Ohashi teach such nucleic acids in their article entitled "E2F sites that can interact with E2F proteins cloned from rice are required for meristematic tissue-specific expression of rice and tobacco proliferating cell nuclear antigen promoters" (The Plant Journal (2002), Vol. 29, pp. 45-49). For example, the instant SEQ ID NO:194 encodes OsE2F1, and Kosugi and Ohashi

Art Unit: 1638

teach the amino acid sequence of fragments of this protein (see page 50, Figure 3).

Kosugi and Ohashi teach nucleic acids encoding DPa and DPb from Arabidopsis (see page 56 second paragraph), and these proteins each bind to OsE2F1 such that DNA binding activity was stimulated and relatively strong transcriptional activation occurred in a yeast assay (see paragraph bridging pages 49-50), which demonstrates these proteins have the inherent property of being capable of binding in a yeast two-hybrid assay. Therefore, the technical feature linking the inventions of Groups I- CCCXXXVIII does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art.

Accordingly, Groups I- CCCXXXVIII are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

Claim 1 (in part) links the inventions of groups I-XCVI. For example, the nucleic acid molecules of SEQ ID NO:1 (group I) and SEQ ID NO:13 (group VII) are each proposed to bind to the polypeptide of SEQ ID NO:194, therefore the recitation of a nucleic acid encoding a polypeptide that binds to SEQ ID NO:194 links these two sequences which are from groups I and VII. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 1 as it relates to SEQ ID NO:194.

Similarly, claims 39 links groups XCVII-CXCII; and claims 54-56 link groups CXCI-CCCLXII.

Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant applications. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. In re Ziegler, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP 804.01.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.



The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy K. Worley whose telephone number is (571) 272-8784. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1638

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CKW

Aug. 18, 2006

  
ANNE MARIE GRUNBERG  
SUPERVISORY PATENT EXAMINER